

REMARKS

This application pertains to a novel process for separating solid catalysts, present in dissolved or colloidal form from solutions in a nonaqueous solvent with the aid of a membrane.

Claims 1-8 and 10-17 are pending.

Claims 1-8, 10, 11, and 15-17 stand rejected under 35 U.S.C. 102(b) as anticipated by Karau (US 6,472,571).

Examiner contends that arguments traversing the rejection of claims 1-8, 10, 11 and 15-17 as being anticipated by Karau is not found persuasive.

As previously pointed out, the Karau reference teaches a process relating on catalysts having increased molecular weight. Applicant indicates that the basis of that statement is not found in column 4, lines 32-41, but in the teaching of Column 5, lines 17-25, disclosing how to increase the molecular weight of his catalyst. Furthermore Karau discloses in example 2, that the employed catalyst is bonded to polystyrene polymer with a molecular weight of 38 kDa. Accordingly the catalysts of the Karau reference are significantly increased in molecular weight. Use of such catalysts of increased molecular weight forms an essential property of the process disclosed by the Karau reference.

The argumentation that it is not believed that the catalyst is somehow growing in molecular weight in the process described in the Karau reference is not of relevance for discriminating the process claimed by the Applicant from the Karau reference. Applicant furthermore never argued that a growth of the catalyst within the process of the Karau reference would prevail, but consistently stated that it has an increased molecular weight at any given time point before the actual separation occurs by means of a membrane.

Nevertheless, a modification to increase the molecular weight of the catalyst in the run-up to the process of the Karau reference has to be considered likewise to a catalyst growing in the process, if the growth prevails before the actual separation.

The essential need of the Karau reference to somehow enlarge the molecular weight of its catalyst can only be derived from significant differences in the separation process.

If the examiner would be right in stating that the membrane in the Karau reference is the same as what Applicant claims, no evidence can be found why someone skilled in the art would add a redundant modification step to the process.

One can likewise argue that the membrane used by applicant has to have different properties, as in contrast to the Karau reference it ensures separation of not enlarged substances.

Accordingly, Applicants' process is specifically directed to the removal of substance whose size is not increased, consequently resulting in the property "without changing the molecular weight of said substance" to be discriminating from the Karau reference. Applicants' process therefore represents a substantial advance in the art as compared to Karau, as there is no need to enlarge the substance in order to enable the process to operate.

Hence the Karau reference neither anticipates nor suggests Applicants' claims and the rejection of claims 1-8, 10,11, and 15-17 under 35 U.S.C. 102(b) as anticipated by Karau (US 6,472,571) should now be withdrawn.

Claims 12-14 stand rejected under 35 U.S.C. 102(b) as anticipated by Karau (US 6,472,571).

Applicants' appreciate the citation of In re King. However, Applicant's catalysts are substantially different from those of the Karau reference, as their catalysts are necessarily modified to increase their molecular weight and as argued above it's therefore wrong that the membrane employed by Applicant is the same compared to the Karau reference. Hence Applicants' process, as presently claimed, is not taught by the cited references. Unlike the situation in the King case, the membrane taught by Karau would therefore not perform the function disclosed in Applicants' method claims, if used in its normal and usual operation, as it would fail to perform the claimed separation.

Accordingly the rejection of claims 12-14 under 35 U.S.C. 102 (b) as anticipated by Karau should now be withdrawn.

Claims 12-14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Karau applied to claim 2 and in further view of WO 01/07157.

WO teaches a process for separating "normal noble metal complex catalyst molecules from other organic molecules (...)" without the necessity of attaching the

complex catalyst molecules to a polymer backbone" (page 6). Furthermore disclosure is given on possibly supported membranes, while the support can as well as the sub-nanoporous membrane be made of silica, alumina and zirconia (pages 10-11). The sub-nanoporous membrane can in some instances be coated on the support (page 11).

Accordingly the Examiner contends that substitution of the coating of the WO reference by a specific coating with silane is the only difference between Applicants invention according to claims 12-14 and WO.

As argued above, employment of the membrane disclosed by Karau in the process of WO would yield loss of enablement of separating the catalyst from the liquid without having to increase the molecular weight of the catalyst. Therefore the combination of the teachings of Karau with WO can not overcome the discrepancies between Karau and Applicant's invention.

The rejection of claims 12-14 under 35 U.S.C. 103(a) as obvious over Karau as applied to claim 2 above, and further in view of WO 01/07157 should therefore be withdrawn

Claims 1, 2, 7, 8 and 10-17 stand rejected under 35 U.S.C. 102(b) as being anticipated, or in the alternative, under U.S.C. 103 (a) as being unpatentable over Cohen (US 6,440,309).

The examiner contends that Cohen differs from the claims in the solute being separated being a "solid", but states that he does not find the fact that the solid substance is in colloidal or dissolved form is limiting. Even though the Examiner fails to provide reasons for assuming that the solid substance prevailing in colloidal or dissolved form is not limiting, he concludes under that assumption that if the membrane of Cohen is capable of removing volatile solvents from a solution, it anticipates or at least makes a use as means for removing a solute from a solution obvious.

Applicant can not understand the conclusion that Cohen anticipates, or at least makes use of Cohen's membrane as means for removing a solute from a solution obvious, as in Cohen a clear disclosure of the purpose and mode of action of the membrane is given. Cohen discloses that the volatile substance has a higher solubility in the grafted polymer and even contends, that "generally speaking, chemicals, which can be separated by the present invention are those which are attracted to the graft polymer on the ceramic support" (column 9, lines 56-66). Cohen does not teach or suggest that a

given solute or solvent is retained, but teaches a mode of action based on affinity. If Cohen's pervaporated solvent would be read as being applicant's solid and an affinity of the solid to the grafted polymer would be presumed, Cohen's membrane would never inherently perform the method claimed. This is because after migration into the grafted polymer based on presumed affinity; the solid would thereon be trapped in the grafted polymer, as solids do not display a volatility, which is needed to drain the migrated substance out of the grafted polymer. Accordingly, after a certain time Cohen's grafted polymer will be fully loaded and blocked with the substance and no further separation of the substance would occur.

If Cohen's pervaporated solvent would be read as Applicant's non-aqueous solvent and an affinity of the non-aqueous solvent to the grafted polymer would be presumed, Cohen's membrane would never inherently perform the method claimed. This is because of solutes tending to be evenly distributed in solvents due to the law of entropy maximization, as long as no physical hindrance prevents them from distributing in the solvent. Accordingly, if the grafted polymer only acts on a basis of affinity to the solvent it can not prevent the solute to migrate with the solvent. Hence no separation is achieved, as disclosure of a physical hindrance displayed by the polymer grafted membrane is not found in Cohen.

Due to the different mode of action the device disclosed by Cohen is different to Applicants' and would never perform the method claimed under normal and usual operation. Applicant therefore argues, that *In re King*, 801 F.2d 1324,231 USPQ 136 (Fed. Cir. 1986) can not be applied here.

As argued before a simple interchange of "solid material" with "other solvent" is not applicable with regard to Cohen's disclosure as due to the solute state of the solid matter, further physical laws and modes of actions need to be considered. Hence *KSR Int'l. v. Teleflex Inc.*, 127 S. Ct. 1727, 1732, 82 USPQ2d 1385, 1390 (2007) can not be applied here.

Accordingly the rejection of claims 1, 2, 7, 8 and 10-17 under 35 U.S.C. 102 (b) as anticipated by Cohen, or alternatively, under 35 U.S.C 103 (a) as being unpatentable over Cohen should now be withdrawn.

Claims 1-8 and 10-17 stand rejected under 35 U.S.C. 103 (a) as being unpatentable over Cohen as applied before and further in view of WO 01/07157

As pointed out above, the Cohen reference is directed towards a separation of liquid components from each other, and the membrane employed by Cohen for doing the same would never perform as membrane in Applicant's claimed invention.

These discrepancies can not be overcome by application of Cohen's membrane in a process disclosed by WO.

Accordingly, no combination of Cohen and the WO reference could ever lead those skilled in the art to Applicants' novel process, and the rejection of claims 1-8 and 10-17 under 35 U.S.C. 103(a) as unpatentable over Cohen as applied before and further in view of WO 01/07157 should now be withdrawn.

In view of the present remarks, it is believed that claims 1-8 and 10-17 are now in condition for allowance. Reconsideration by the Examiner is respectfully requested, and the allowance is courteously solicited.

CONDITIONAL PETITION FOR EXTENSION OF TIME

If any extension of time for this response is required, Applicants request that this be considered a petition therefor. Please charge the required petition fee to Deposit Account No. 14-1263.

ADDITIONAL FEE

Please charge any insufficiency of fee or credit any excess to Deposit Account No. 14-1263.

Respectfully submitted,

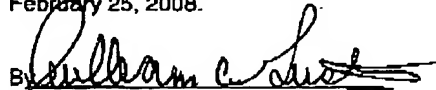
NORRIS, McLAUGHLIN & MARCUS, PA

By 

William C. Gerstenzang
Reg. No. 27,552

WCG/tmo
875 Third Avenue - 18th Floor
New York, New York 10022
(212) 808-0700

I hereby certify that this correspondence is being transmitted via facsimile, no. 571-273-8300 to Mail Stop Amendment United States Patent and Trademark Office, addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on February 25, 2008.

By 

William C. Gerstenzang
Date February 25, 2008